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DECIMAL COINAGE

1. INTRODUCTORY

The period of commercial reconstruction which followed on the Armistice of 1918, has been marked by a rigid investigation into many of the methods of commercial procedure. The re-establishment of export trade is so essential to the prosperity of the British Empire, and particularly of the United Kingdom, that a re-examination of the entire position became necessary. The events of the war came as a supreme test to many national institutions, confirming the solidity of some, and causing the abandonment of others, which proved unable to withstand the strain. The aftermath of the years of stress has induced a critical spirit, which demands that even old established institutions must no longer justify themselves by age alone, but by adaptability to modern conditions. If they have not sufficient flexibility for this purpose, then they must give way to others which have.

2. PROPOSALS FOR COINAGE REFORM

Under these circumstances, it was inevitable that the British systems of coinage, weights, and measures should once more attract the attention of reformers. It is nearly a century since the first motion to establish decimal coinage was brought forward in the House of Commons. The movement in favour of decimalisation has never lacked powerful adherents, but for ninety years it can hardly be said to have enlisted a great popular support. With the coming of the European war, many soldiers from Britain and Australasia, fighting on the Western Front, came into contact for the first time with a system of decimal coinage. Under these circumstances a new Royal Commission - the latest of a long line - came into existence, and issued its Report in 1920. This Report, and the circumstances which led up to it, will be considered at a later stage.

3. COINAGE AND WEIGHTS AND MEASURES

It is impossible to discuss the subject of decimal coinage without some mention at least of the kindred subject of decimal weights and measures. In theory, the questions of decimal coinage and decimal weights and measures are apparently identical, but in practice the problems to be surmounted differ widely in their nature. Of all important trading countries, Britain stands alone in her non-adherence to decimal coinage. But the question there is complicated by the fact that more than one system of decimal coinage is open for adoption if the present system be abandoned. In weights and measures the present Imperial standards are strengthened by the powerful adhesion of the United States. As against this, however, is the fact that there is only one

decimal system in the field - the metric system - which, if adopted by Great Britain and the United States, would at once become the international system for commerce and industry, as it already is for science. In view, therefore, of the fundamental difference in the problems to be faced, this article will be limited to the subject of decimal coinage.

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4. COINAGE SYSTEMS OF THE EMPIRE

In 1522, a treatise on arithmetic was published by Cuthbert Tunstall, at that time Bishop of London, from which it appears that every European nation at that date had a duodecimal coinage. After the lapse of exactly four centuries it is found that every continental European country has abandoned duodecimal for decimal coinage, that new countries have unanimously adopted the decimal coinage bronze system, and that, in short, decimal coinage is universal throughout the world, excepting the in part of the British Empire. With regard to the British Empire. the following currency groups are in existence:

- (a) Duodecimal Group: Includes United Kingdom, Union of South Africa, of Australasia, West Indies, West African Colonies, Malta, Gibraltar, Falkland Islands, and Bermuda.
- (b) Decimal Group: Based upon American currency. Includes Canada, Newfoundland, and British Honduras.
- (c) Decimal Group: Based upon Indian currency. Includes India, Ceylon, Zanzibar, Somaliland, Mauritius, and the Seychelles.
- (d) Decimal Group: Based upon the Straits dollar. Includes Straits Settlements and Malay States.
- (e) Decimal Group: Based upon the pound sterling, form, and decimal sub-divisions. Includes British East African Protectorate.

It will be seen, therefore, that decimal coinage has made considerable inroads into the of the British Empire, although, of course, group (a), the duodecimal group, is still by far the period most important. The Parliament of the Union of South Africa is now (July, 1922) discussing a new Bill which proposes to reform the coinage by retaining the pound sterling and decimalising it, either through the medium of the form and mil, or the shilling and cent. If this Bill should become law, the Union of South Africa will move out of group (a) into group (e).

A study of the foregoing shews that, with the exception of group (a) of the British Empire, there has been a distinct and unanimous movement in favour of decimal coinage. Countries starting their coinage *ab initio* have adopted it, and other countries having a duodecimal system have abandoned it in favour of a decimal system. Further, no country which has adopted a decimal system has shewn any desire to revert to any other. But no country, especially a country with a highly-developed commercial system, will lightly face the difficulties inherent in a variation of coinage unless a great change for the better is expected, and consequently it becomes a matter of great interest and importance to study those qualities in decimalism which have received such world-wide endorsement.

5. PRACTICAL ADVANTAGES AND DISADVANTAGES

General

The theoretical case for decimal coinage can be stated in a very few words. It may be remarked here that a point frequently urged in favour of the duodecimal system is the superior divisibility of twelve as opposed to ten. But this advantage is nullified by the fact that the duodecimals cannot

be adapted, for the purposes of computation, to our system of numeration, which is based upon ten. So long as this continues - and the permanence of the decimal system of numeration is apparently assured - coinage must be divided on a similar basis to ensure the greatest possible facility in computation. This facility is provided by the decimal system in ample measure. Under it the addition of money is performed in one operation:

the duodecimal system demands two - addition and division. Under a decimal system monetary tables are simplified. Certain complicated arithmetical operations, such as "reduction of money" and "practice," are rendered unnecessary. Lastly, statistical computations and conversions of foreign exchanges are lightened. The simplification of arithmetic would economise much of the time spent upon that subject in schools.

The question of coinage is, however, a practical one, and cannot be decided by theoretical considerations only. It was pointed out quite reasonably in the Report of 1920 (alluded to in 2 hereof) that in dealing with currency a most important consideration is the facility which the actual coins afford for the multitude of transactions in every day life in which coins change hands, and for which paper calculations are either not employed at all, or employed only by one party to the transaction. Of such transactions, the purchase and sale of commodities by retail, and the rendering of such services as transportation, form a substantial proportion. These preliminary observations are necessary before proceeding to consider the present British system of coinage, and the efforts which have been made from time to time to reform it.

Application, to Present Monetary System

The gold and silver currencies present no difficulty. The gold coins go down from the sovereign, and the silver coins from the florin, in simple binary subdivisions. This binary subdivision is also maintained in the bronze coinage, but the factor which links up the bronze with the silver coinage introduces the duodecimal element, and if the British system is to be decimalised, this factor must be eliminated. At present, the highest coin of account is 240 times the lowest. Various schemes have been proposed from time to time, under which the ratio of the highest coin of account to another coin of the system is either 200 or 250, these being the numbers nearest to 240 which are exact sub-multiples of a power of 10. Any of these schemes would give a decimal coinage, but whichever (if any) is ultimately adopted, the fact must be faced that either the present pound or the penny must be abandoned. This fact constitutes the basic difficulty of the situation, and it is so important that all proposed schemes of reform may be divided into two classes according as to whether the pound or the penny is amended. If the pound is altered in value, the change will profoundly affect higher mercantile transactions, banking, legal contracts, wholesale business, and the foreign exchanges, in short, all financial transactions in which large amounts are involved. On the other hand, if the penny is altered in value, then the poorer classes especially must face an alteration in the conditions governing the immense mass of retail transactions in which only bronze coins are used. The penny has been called the "monetary unit of the proletariat," and if any alteration were effected in its exchange value, the transition the period would undoubtedly involve difficulties.

6 OUTLINE OF VARIOUS SCHEMES

The advantages and disadvantages of the more important schemes of reform propounded from time to time may now be discussed.

The leading ones are as follows: -

A. - Systems Based upon the Pound

(a) Pound-mil System. Under this system the pound is divided into 1,000 parts each called a mil.

The half-sovereign is retained as 500 mils, and the florin as 100 mils; the shilling as 50 mils, and the sixpence as 25 mils. The half-crown and threepenny piece would be withdrawn, and replaced by a nickel piece of ten mils. The bronze coinage would probably be 5, 4, 2, or the and 1 mils.

(b) **Florin-mil System.** This is really a variation of the pound-mil system, with the florin as highest coin of account. It requires only two places of decimals instead of three.

(c) **Shilling-cent System.** Under this system the shilling is taken as the highest that a coin of account and divided into 100 cents. The ten-cent piece, which is of 20 per cent, in excess of the present penny, has been termed the "high value" penny.

B. - Systems Based upon Bronze Coinage

(a) **New Guinea System.** This system is based upon The farthing. Three new coins of account would be necessary, *viz.*, 10 farthings (2½d.), 100 farthings (2s. 1d.), and 1,000 farthings (£10s. 10d.), constituting the "new guinea."

(b) **Royal System.** This is based upon the half-penny, which is the lowest coin of account. The highest coin of account is a silver coin of 100 half-pennies called a royal. This scheme was submitted to the Commission of 1920 by Lord Leverhulme.

(c) **Imperial System.** This is based upon the penny, which is the lowest coin of by account, the highest being a coin of 100 pence. The earliest advocate of the scheme seems to have been Dr. John Gray, who was for 50 years connected with the British museum, but it appears to have been first definitely formulated in 1854 by Mr. Frederick Minasi, who called the highest coin of account an imperial. This system has recently been revived in Melbourne under the title of the **Via Media** Currency.

Comparison of Schemes

The advantages and disadvantages of schemes based respectively upon the pound and the bronze coinage have already been discussed A brief comparison between the schemes included in each group is given hereunder.

In the first group the pound-mil scheme was first in the field, and has always commanded a large volume of support. Its special advantage over the other members of its group is that computations in statistics, funded debt, and higher finance generally are undisturbed. Moreover, the pound sterling has an immense international prestige. Its greatest drawback is that three places of decimals are required, since the pound contains 1,000 mils.

The florin-mil system has an advantage over the pound-mil system in requiring only two places of decimals. It has been opposed in the past from the feeling that the prestige of the pound sterling would be adversely affected.

The shilling-cent system is subject to the same remarks as the form-mil, with the additional comment that computations in statistics, funded debt and finance would this time require a multiplying factor although only a very simple one.

Turning to the three schemes which decimalise the coinage from the other end, the new guinea system," the weakest of the three, may be dismissed in a very few words as combining nearly all the drawbacks of other schemes with no countervailing advantages. It was decisively rejected by the Royal Commission of 1853 and has never since been seriously revived.

This leaves the scheme of Lord Leverhulme and the Imperial system. In principle they are much the same, the "Royal" being 100 half-pennies, and the "Imperial," 100 pence. In practice, however, the "Royal" system involves five new coins, and suggests that the earlier difficulties

might be greater than those involved in the "Imperial" or **Via Media**" system. In this respect the "Royal" scheme is much inferior to the "pound-mil" scheme, which could be started in operation by the issue of two new coins only, the 1 mil and 5 mil.

In connexion with these two schemes it may be noted that they have been advocated, and very reasonably, as a means of avoiding the transitional difficulties inherent in any change involving an alteration in the value of the penny. But within the last few years it has been claimed on behalf of both systems that they will render possible a linking up of the coinage systems of all the English-speaking countries. The "Royal" and "Half imperial" are both 50d., while the value of the dollar circulating in the North American continent is 49.316d. This certainly constitutes a close approximation, but it is not that absolute coincidence which in this matter is all essential.

History of Decimal Coinage Movement in Great Britain

The following survey of the movement in Great Britain is condensed from the report of the Royal Commission of 1920.

The matter first came into prominence in 1824, when Sir John Wrottesley brought before the House of Commons a motion for enquiry into the applicability of the decimal scale to coins. The date is interesting, for by that time sufficient evidence had accumulated from France and America to shew that a decimal system was not only good in theory, but satisfied also the practical canons in relation to coinage alluded to earlier in the present article. The experience of France was particularly interesting, as the old coinage which was displaced ran as follows : - 12 deniers equalled 1 sou; 20 sous equalled 1 livre. In other words the relationship between livres, sous, and deniers was exactly the same as that between pounds, shillings, and pence. Wrottesley's motion was withdrawn, on the understanding that the currencies of Great Britain and Ireland should be assimilated. which was done in 1825. Wrottesley proposed a scheme which was practically the pound mil scheme. A similar recommendation was made by a Commission in 1841, and again in 1843. Sir John Bowring, in 1847, brought forward a motion in the House of Commons in favour of the coinage and issue of silver pieces of the value of 1/10th and 1/100th of a pound sterling. The motion was withdrawn on the understanding that a silver piece of the value of 1/10th of a pound should be coined and issued. This undertaking was redeemed shortly **afterwards** by the coining of the florin, and to this day it remains the only step ever taken by the United Kingdom in the direction of decimal coinage.

In 1855 Mr. Brown, a leading decimalist carried two motions in the House of Commons to the effect that - (1) In the opinion of this House, the initiation of the decimal system by the issue of the form has been eminently successful and satisfactory: and (2) That further extension of the system will be of public advantage. In view of the public interest aroused in the subject, another Royal Commission was appointed in 1856. On this occasion, the advocates of schemes based upon the penny urged their case, Dr. John Gray being prominent. The result was that the Commission, whilst rejecting schemes based upon the penny, and considering the pound-mil scheme to be the only one which would have any reasonable chance of sufficient support, nevertheless decided that the adoption of any system of decimal coinage would introduce difficulties which would out weigh the corresponding advantages. The matter then remained in abeyance for half a century, as far as the United Kingdom was concerned. The question was revived again in the early years of the twentieth century at two Imperial Conferences, the representatives of Australasia taking the lead. The resolutions introduced were ultimately dropped when it became evident that the Imperial Government was not prepared to take any steps. After a rather perfunctory examination of the question by Lord Balfour of Burleigh's Leigh's Committee in 1916, the subject was again reviewed by the recent Royal Commission which reported in February 1920.

The conclusions of this Commission were substantially the same as those of the Committee of

1856. They examined the three possibilities of the situation, (a) the adoption of a decimal scheme based upon the bronze coinage, (b) the adoption of a decimal scheme based upon the £, and (c) the retention of the present system. The evidence submitted by the Bankers' Institute, Chambers of Commerce, and manufacturers, convinced the Commission of the danger of abandoning the pound, and consequently scheme (a) was rejected as impracticable. Scheme (b), on account of the steady support which it has enjoyed, received serious consideration, but was finally abandoned on account of the transitional difficulties. The majority of the Commissioners - 13 out of 20 - signed a report recommending the retention of the present system, while out of the remaining 7 members 4 supported the pound-mil scheme, and 3 the "Royal" scheme of Lord Leverhulme.

The preceding historical survey brings into prominence two matters so far as the experience of the United Kingdom is concerned. Firstly, it is evident that the influence of higher finance is so strong that any scheme based upon the bronze coinage has little hope of acceptance. Two of these schemes differing in detail have been decisively rejected. Secondly there is the fear that any scheme based on the pound, which alters the value of the penny, would be distasteful to the poorer classes. This attitude has been adopted by such eminent public men as Gladstone and Asquith. So far as the United Kingdom is concerned, matters seem to have reached a deadlock.

It may be noted that the report of the Commission of 1920 contained one statement which is open to question. In referring to the Commission of 1856 it was remarked that "the intervening years have brought no fresh factors to be taken into account." While it is true that much of the evidence given in 1920 could equally well have been given in 1856, nevertheless since the earlier period a considerable amount of new ground had been broken. In the first place the supporters of the pound-mil scheme urged that the adoption of their system would provide a smoother gradient in relation to prices. This furnishes a distinct argument in favour of their scheme if it can be sustained. As noted previously the English gold coins, the silver coins from shilling to threepence inclusive, and the bronze coins, all exhibit a binary progression, and the ability to allow of this binary progression is generally admitted to be a strong point in any coinage system. The farthing has dropped out of circulation, leaving the penny and half-penny as the lowest coins. Consequently the large number of articles and services which formerly cost a penny can now only be altered in accordance with the cost of living by an increase of 50 per cent.; and this excessive increase has certainly had its influence on index numbers in the last few years.

Under the proposed pound-mil scheme it is likely that the following coins at least would appear: - 5 mils, 2 mils, and 1 mil. A newspaper which was priced at 5 mils could then be increased to 6 mils, an increase of 20 per cent. If prices should fall in the future, a newspaper which had been raised to three half-pence could be reduced to 5 mils during the transition stage, which would be a substantial reduction in cost without an actual reversion to the pre-war price of one penny. It may be noted at this stage that a decimal system of coinage admits of binary progression just as well as a duodecimal. An excellent instance is furnished by the French System, which affords an almost perfect example of subdivision. The French coins expressed in centimes are as follows : - 1, 2, 5; 10, 20, 50; 100, 200, 500, etc., up to 10,000 centimes or 100 francs. Excluding the two lowest they may be re-arranged as follows : - 5, 10, 20; 50, 100, 200; 500, 1,000, 2,000, etc. Each of these groups of three forms a binary system.

This argument in favour of the pound-mil system based upon an improved gradient is counteracted in the United Kingdom by another which is adverse to the pound-mil, but not to any scheme based upon the penny. Under the National Health Insurance Scheme there are 15 million insured persons, and there are also upwards of 50 million of industrial assurance policies in force. Excepting in the comparatively few cases where the premiums are multiples of sixpence, these contracts could not be adjusted exactly to a decimal system based upon the pound sterling. Several schemes to meet this difficulty were propounded to the Commission of 1920, but none could be considered entirely satisfactory. If these millions of insured persons came from

a class which was financially well-educated the difficulty of adjustment would not arise.

7. THE MOVEMENT IN AUSTRALIA

The subject of decimal coinage has always commanded considerable interest in Australia. In 1903 a Select Committee of the House of Representatives which had studied the question, and examined witnesses, presented a report to the House advocating the adoption of the pound-mil system. The House debated the report and finally adopted it by a small majority. The Australasian representatives at two Imperial Conferences have raised the subject, but refrained from moving formal resolutions in order not to embarrass the British Government. As a further indication of local opinion it may be recorded that the Commonwealth Government, upon becoming responsible for the minting of silver coins, deliberately excluded the half-crown in order to facilitate the transition to a decimal coinage, should such a step be undertaken in the future.

It will be seen, therefore, that public opinion in Australasia is more advanced upon this matter than in the United Kingdom. If the Royal Commission of 1920 had reported favorably upon decimal coinage, and the Imperial Government had adopted it, the reform would almost certainly have been adopted in Australia. Up to the present the official attitude seems to have been to wait upon action by the Home Government. Whether this will be maintained in the future is not certain, for a new factor is coming into play. The outer marches of the Empire are beginning to stir.

8. ACTIVITY IN BRITISH EAST AFRICA

It has already been pointed out in a previous paragraph that the British East African Protectorate has a decimal coinage based upon the form. Up till 1919 its principal coin was the rupee, which was legal tender at the rate of 15 to the pound. In order to avoid exchange difficulties this currency was abolished and the form was substituted. To meet the wishes of the mercantile community, however, the decimal subdivision was retained, and British East Africa was thus the first community to establish a variant of the pound-mil system. The significance of this step lies not so much in the political importance of British East Africa, as in the fact that the step was presumably taken with the full concurrence and approval of the Colonial Office.

9. SOUTH AFRICA, WEST AFRICA, AND THE WEST INDIES

The Union of South Africa was the next unit to take up the consideration of decimal coinage, and a Bill for its establishment is under discussion at present. If South Africa should adopt the florin-mil scheme it is possible that the West African colonies, Zanzibar, Mauritius, Somaliland and Seychelles, will follow suit, thus forming a solid African group.

Recently a committee was formed with a view to reforming the currency of the West Indies, where opinion in favour of the decimal system is strong. If the reform was established there, it would leave Australasia and the United Kingdom the sole remaining countries which had abstained from adopting decimalism in coinage.

